

“Root Canal Microorganism Profiles on Upper Anterior Teeth of Apical Periodontitis”

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Abstract

Microorganisms are the main causative agents on the development of apical periodontitis. Microorganisms infecting the root canal system are colonized in communities as biofilm. These bacterial communities show distinct pattern related to the different forms of apical periodontitis which are determined by species richness and abundance. This study is aimed to examine the root canal microorganisms on upper anterior teeth of asymptomatic apical periodontitis and chronic apical abscess. Samples were required from patients referring to endodontic Department of Hasanuddin University Dental Hospital from July 2013 until September 2013. Twenty two samples, aged 17-40 were collected from 16 patients with asymptomatic apical periodontitis, and 36 samples, aged 18-50 were collected from 36 patients with chronic apical abscess. Microorganisms were evaluated using culture technique. The results showed predominant bacteria in asymptomatic apical periodontitis is *Porphyromonas* spp (31.3%) while in chronic apical abscess both *Streptococcus* spp (44.4%) and *Porphyromonas* spp (41.7%) showed similar frequencies. This study shows *Porphyromonas* spp play dominant role in apical periodontitis either in asymptomatic apical periodontitis or chronic apical abscess.

Keywords: root canal, microorganism, culture technique, apical periodontitis